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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,859	02/18/2005	Isao Karasawa	Q86348	3578
23373 7590 08/25/2008 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
EXAMINER THROWER, LARRY W				
ART UNIT		PAPER NUMBER		
4111				
MAIL DATE		DELIVERY MODE		
08/25/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/524,859

Applicant(s)

KARASAWA ET AL.

Examiner

LARRY THROWER

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on July 7, 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 5-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date 8/7/06; 2/18/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1-4 in the reply filed on July 7, 2008 is acknowledged. Claims 5-10 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected apparatus, there being no allowable generic or linking claim.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 3 recites the limitation "a fluid" twice. It is not clear if the claim includes two fluids or a single fluid. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Orlando et al. (U.S. Patent No. 4,328,967).
- Regarding claim 1, Orlando et al. discloses a method of introducing a plastic raw material liquid (fig. 1; col. 3, lines 16-29). The method includes positioning a plurality of liquid delivery units (12, 14) each for intermittently drawing in and discharging a fluid at a constant rate (col. 2, lines 55-64), parallel to each other (12, 14; fig. 1), discharging flows of the plastic raw material liquid at different times from the liquid delivery units (col. 2, lines 56-69; col. 3, lines 60-64; the liquid being discharged at different times for each bowling ball manufactured), combining the flows of the plastic raw material liquid discharged from the liquid delivery units with each other (fig. 1; col. 3, lines 3-6), and introducing the combined plastic raw material liquid into a casting polymerization mold (66; col. 3, lines 3-6).
 - With respect to claim 2, Orlando et al. teaches the liquid delivery units drawing in and discharging the plastic raw material liquid (fig. 1; lines 20-29) by moving a plunger (58) back and forth in a cylinder (fig. 1) to change the volume of the cylinder (fig. 1).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Orlando et al. (4,328,967) as applied to claim 1 above, in view of Steiger et al. (5,159,828).

- Orlando et al. fails to disclose an accumulator for changing the volume of a fluid depending on the pressure of a fluid disposed in a flow passage for the combined plastic raw material liquid. However, Steiger et al. discloses an accumulator for measurement of fluid volume changes under pressure (abstract). As taught by Steiger et al., such an accumulator allows for reproducible volume change measurements (col. 1, lines 55-59). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of introducing a plastic raw material liquid of Orlando et al. with the fluid accumulator of Steiger et al. to measure the pressure of the fluid changes, as taught by Steiger et al. (col. 1, lines 55-59).

10. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Orlando et al. (4,328,967) as applied to claim 1 above, in view of Petschner (5,032,267).

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- Orlando et al. fails to disclose a filter disposed in a flow passage for the combined plastic raw material liquid. However, Petschner teaches the use of a filter for filtering raw plastic material (col. 1, lines 7-14). As taught by Petschner, such filters are able to remove impurities (col. 1, lines 32-36). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of Orlando et al. with the filter of Petschner to remove impurities from the raw material liquid, as taught by Petschner (col. 1, lines 32-36).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LARRY THROWER whose telephone number is (571)270-5517. The examiner can normally be reached on Monday through Thursday from 7:30AM-5PM est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sam C. Yao can be reached on 571-272-1224. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

August 22, 2008

/Larry Thrower/
Examiner, Art Unit 4111

/Naeem Haq/
Supervisory Patent Examiner, Art Unit 4111